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(54) Title: USE OF FLUORESCENCE CORRELATION SPECTROSCOPY TO IDENTIFY COMPOUNDS THAT BIND TO TARGET SPECIES UNDER ISOTHERMAL DENATURING CONDITIONS

(57) Abstract: The present invention provides a method for identifying a test compound that binds to a target species. The method includes: incubating at least one test mixture under isothermal denaturing conditions, each test mixture comprising at least one test compound, and at least one target species, wherein the isothermal denaturing conditions are effective to cause at least a portion of the target species to denature to a measurable extent; detecting a denaturation signal of each target species in the presence of the at least one test compound by a change in the diffusion properties of the target molecule using fluorescence correlation spectroscopy; and comparing the denaturation signal of each target species in the presence of at least one test compound with a denaturation signal of the same target species in the absence of at least one test compound under the same isothermal denaturing conditions.